بسم الله الرحمن الرحيم

عنوان المحاضرة: Menopause
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-Def: Complete gonadal failure (d.t exhaustion of follicles) with permanent cessation of menstruation
*Climacteric: period that precede menopause (4-5 years), during which estrogen levels decrease and estrogen dependent organs become independent
*Premenopause / Postmenopause / Perimenopause
ـ المصطلحات دي مهمة علشان على حسب الفترة بفكر في الـ etiology زي في حالة الـ Vaginal bleeding لو Perimenopausal بفكر في dysfunctional uterine bleeding ولو Postmenopausal بفكر في الـ Malignancy والـ Infection

-Types of Menopause:
1-Physiological: commonest, due to exhaustion of follicle, 45-55 years
2-Premature: <40 years, unknown mechanism (may be autoimmune, Infection, radio/chemotherapy)
3-Delayed: > 55 years, hyper-estrogenic status, liable to endometrial hyperplasia and carcinoma
4-Induced: e.g. in Bilateral Oophorectomy

-Physiological Changes:
1-Hormonal: ↑ Gonadotropic Hormones (FSH levels greater than 30 IU/L)
↓ (Estrogen (esp. E2) - Progesterone - Androgens (except ovarian testosterone) - Prolactin)
2-Menstrual Function: ↓ (either gradual or abrupt)
3-Genital Tract: -Atrophy of Ovaries -Uterus Atrophy (body: cervix = 1:1) **regress myoma /adenomyosis
-Cervix (Portio vaginalis flushed the vagina, Atrophic glands → dry vagina / dyspareunia /↓ Libido)
-Genital Support: Ligaments weakness→ Prolapse, urine incontinence
**Palpable ovaries in postmenopause by bimanual examination → Palpable Ovary Syndrome → Tumor
4-General: -Breast Atrophy -UT→ Frequency – dysuria -Bone→ Osteoporosis
-CVS→ ↑ Incidence of Htn, ischemic HD (d.t. changes of lipid profile controlled by estrogen)
**Causes of Osteoporosis: -↓Physical activity -↓E2→↓Ca^{2+} absorption, ↑Parathormone action

-Clinical Features: (Symptoms)
1-Vasomotor disturbances = (Hot flushes) sweating, palpitation, even may fainting
2-Psychological disturbances (anxiety, Irritability, depression, ...) 3-Osteoporosis (Pathological fractures)
4-Genito urinary: (dry vagina, dyspareunia, ↓ Libido)
D.D. of Menopausal syptoms:
1-Causes of 2^{ary} amenorrhea: (premature menopause, Pregnancy)
2-Hot flushes: (Thyrotoxicosis, Pheochromocytoma)
3-Perimen. bleeding: (dysfunctional uterine bleeding
4-Bone rarefaction: (osteoporosis, osteomalacia, hyperparathyroidism, metastasis)
Investigations: 1-Hormones: Basal serum FSH (day 2 or 3 from the menses)
2-For Osteoporosis 3-Vaginal cytology 4-Endometrial biopsy

Treatment:
1) General Lines: (Counseling, Reassurance, Life style modifications)
2) Hormone Replacement Therapy:
Indications:
1-Postmenopausal (Osteoporosis) 2-Surgical (Induced) Menopause
3-Premature ovarian failure 4-Panhypopituitarism e.g. Sheehan (Simmonds) syndrome
5-Gonadal Dysgenesis (Ovarian failure, turner, Androgen sensitivity syndrome)
Forms: 1-Estrogen Alone (only for hysterectomized women) **If uterus is present → hyperplasia
2-Estrogen/Progesterone 3- Progesterone only

HR

Regimens:

1-Sequential E/P (daily estrogen and accompanied by progestin 10-14 days every month)

2-Continuous E/P (↑ Incidence of bleeding)**

Benefits:

1-↓Vasomotor symptoms   2-↑Depressed Mood   3-Improve cognitive functions (e.g. memory)

3-Lubrication of Lower GUT (↓dyspareunia)   4-↓Incidence of Osteoporosis and Fractures

Risks:

1-CVS: ↑ Incidence of Ischemic HD, MI   2-Thromboembolic diseases: DVT, Pulm. embolism

3-↑Incidence of Breast, Ovarian & Endometrial Cancers

Alternatives:

1-Life style adaptation: (Sport, Recreation, Weight reduction, avoiding hot weather, Cotton clothes)

2-Dietary: (Stop smoking & alcohol, Milk)   3-Complementary: (Acupuncture, herbs, Physiotherapy)

4-Pharmacotherapy:

- SERMs (Selective estrogen-receptor modulators) → act both agonist & antagonist e.g. Tamoxifen

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